

## WHAT IS CLAIMED IS:

1. An IP network communication apparatus including a transmitting means for converting a digital signal delivered from a public switched telephone network into IP packets, and for transmitting the IP packets to an opposing station by way of an IP network, and a receiving means for, when receiving IP packets from said opposing station by way of said IP network, converting the IP packets back to a digital signal and sending out it onto said public switched telephone network, said IP network communication apparatus comprising:

a digital signal storage means for storing digital signals transmitted to said IP network communication apparatus from said public switched telephone network therein;

15 a delay calculating means for transmitting a control packet including time of transmission of the control packet to said opposing station by way of said IP network, and for, when receiving the control packet sent back thereto from said opposing station by way of said IP network, calculating a transmission path delay that IP packets undergo during one round trip between said IP network communication apparatus and said opposing location from time of the receipt of the control packet and the transmission time contained in the control packet; and

20 an echo removing means for removing a far side echo superimposed on the digital signal, which is sent out onto said public switched telephone network by said receiving means, by using a digital signal that is selected from among digital signals stored in said digital signal storage means and that was stored the transmission path delay time earlier.

2. The IP network communication apparatus according to Claim 1, wherein said delay calculating means calculates the transmission path delay at predetermined intervals.

5 3. The IP network communication apparatus according to Claim 1, wherein said delay calculating means calculates the transmission path delay when receiving an instruction for the calculation of the transmission path delay.

10 4. The IP network communication apparatus according to Claim 1, wherein the digital signal which is converted into IP packets by said transmitting means is a sound signal, and the digital signal which said receiving means sends out onto said public switched telephone network is a sound signal.